Program Assessment for the
Master of Science in Engineering and Technology Management, M.S.

Technology Management Department
Smith College of Engineering and Technology

Program Learning Outcomes

1. Apply a business-driven approach to engineering and technology concepts.
2. Employ product and project management with the use of rationale and effective decision making.
3. Improve company practices using current technology, analysis, and design. Upon successful completion of this program, students will be able to make strategic and operational decisions in the management of technology by providing the link between engineering, science, and management.

Student Standards of Performance

Students will demonstrate the following: a) ability to use inputs to implement technological change, b) understanding of advanced product and project management concepts in engineering and technological environments, and c) ability to plan for and implement cross-functional teams and processes for change in engineering and technological environments.

The overarching topics addressed match what literature shows as relevant to engineering and technology management: strategy, project management, change management, innovation management, information management, quality management, entrepreneurship, research and design management, technology commercialization, and operations management (e.g., Horwitch & Stohr, 2012). As managers, graduates will be able to deal with and manage the technical and administrative systems in their organizations using traditional technology management skills and will also have integration skills at the technical and administrative levels. As analytic professionals, graduates will have computational and modelling skills. As entrepreneurs, graduates will have the ability to identify and evaluate new opportunities. As integrators, graduates will understand and be able to deal with the complexity and ambiguity of a world of global competition, disruptive technologies, and intense competition.

Equally, the standards, competencies, and marketable skills were chosen based on an assessment of current needs of companies in UVU's service area (Hanewicz, Becker, & Alin, 2017). Based on a study of approximately 350 industry professionals whose purpose was to determine the technology management needs of business and industry and identify the best curricula for effective technology management programs in a college or university, the top ranked skills in order of importance by respondents who selected very or extremely important were as follows:

	Standards, Competencies, and Marketable Skills	Ranking
1	Ability to Plan for & Implement Cross-functional Teams & Processes for Change	84% (244/290)
2	Ability to Scan Environment for Technological Changes	84% (245/291)
3	Ability to Use Inputs to Implement Technological Change	82% (239/291)
4	Understanding Information Ethics, Security, and Privacy Issues	80% (234/291)
5	Ability to Develop Planning Procedures for Selecting New Technologies	75% (218/291)

Formative assessment of these skills will be measured through homework assignments, scholarship, investigation, and in-class engaged learning exercises. Summative assessment will occur through quizzes and exams.

Curriculum Map

Course Prefix and Number	Course Name	PLO 1	PLO 2	PLO 3
Core (21 credits):				
TECH 6010	Engineering Law and Patents	I	D	A
TECH 6450	Engineering Economics and Project Evaluation	D		
TECH 6430	Product Management Processes	A	D	
TECH 6700	Data Driven Decision Making	A		E
TECH 6400	Six Sigma Project Management	A	D	E
TECH 6950	Engineering and Tech. Projects I	E	E	
TECH 6960	Engineering and Tech. Projects II	E	E	
Elective (6 credits):				
TECH 6710	Materials Management	D		E
TECH 695R	Special Topics in Engineering	E	A	

I = Introduced; D = Developed and Practiced; E = Engaged; A = Assessed at the Mastery Level